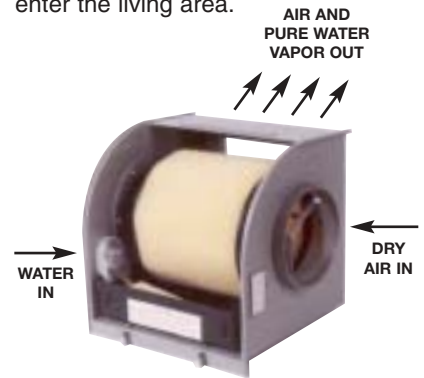


MODEL 81

By-Pass Drain-Type Reservoir Humidifier



General Operating Principle
Evaporation takes place as the heated air from the warm air plenum passes through the moisture laden evaporator sleeve. The sleeve is wetted as it slowly rotates in a float valve controlled reservoir of water. The moistened warm air is then returned to the heating system to enter the living area.



FEATURES, SPECIFICATIONS AND BENEFITS

WHY HUMIDIFY? Proper humidity levels in your home reduce annoying static electricity, dried cracked furniture and wood trim, and wilting house plants. You'll feel more comfortable as scratchy dry skin, throats and noses are soothed. Properly humidified air feels warmer allowing you to turn down your thermostat a few degrees and reduce energy costs yet still feel comfortable.

APPLICATION Drum-type humidifier with capacity for most homes. Installs on vertical warm air supply or cold air return (recommended) plenum.

UNIT SIZE 12" wide x 11-1/2" high x 11" deep

PLENUM OPENING 8" wide x 7-1/2" high

EVAPORATIVE OUTPUT CAPACITY @ .20" PRESSURE DIFFERENTIAL AT STANDARD INDUSTRY RATING CONDITIONS FOR THE FOLLOWING PLENUM TEMPERATURES

Temp °F	GPD	Temp °F	GPD
80°	7.0	140°	18.0
100°	11.3	160°	21.7
120°	16.0		

EVAPORATIVE MEDIA 81-15 Evaporator sleeve. Split drum allows easy separation for removal of polyurethane foam sleeve for cleaning.

WATER SUPPLY Unique, time-proven GeneralAire float valve assembly meters water into reservoir through precision-machined orifice. Saddle valve and 1/4" plastic tubing included.

DRAIN CONNECTION N/A

RANGE OF MODELS N/A

ELECTRICAL 24 V., .03 Amp, 60 Hz. (Transformer and hook-up wire supplied)

CONTROLS Manual air shutter for summer shut-off. Includes GeneralAire H-86 wall/duct mount humidistat.

VERSATILITY Unique design allows right or left hand installation by reversing drum and repositioning float valve, drive motor and bypass. May be installed on up-flow, counter-flow or horizontal furnaces or air handlers.

SERVICEABILITY Thumbscrews release removable front cover. Water tray slides out for easy cleaning.

EASY INSTALLATION Fully assembled with most important installation components included.



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For A Comfortable, Healthy Home, You Need GENERALAire.

How does humidity **AFFECT** my comfort?

Since the air in your home is always trying to reach its saturation point, it will absorb water wherever it's found. That means it is stealing moisture from the bodies of you and your children, your pets, your furniture and even your house plants. By giving up moisture to the air, your skin, throat and nasal passages dry out and crack, leading to various physical discomforts. That's why many doctors recommend humidifiers for allergy and asthma sufferers.

Research has shown that 30% – 60% relative humidity is ideal. Outside this range, bacteria, fungi, viruses and mites thrive and multiply. As these creatures increase in number, so does your risk of being adversely affected.

How does humidity **AFFECT** my house?

Virtually everything in your home made from wood contains some moisture. As dry air sucks that moisture out, the wood shrinks and cracks. Hardwood floors separate at the seams, furniture shrinks and cracks, and doors warp and no longer fit their frames as the moisture is drawn off.

Pianos, guitars and other wooden musical instruments also shrink from the loss of moisture and go out of tune. Maintaining proper humidity levels can eliminate frequent and costly retuning.

Perhaps the most annoying effect of dry indoor air is static shock. As you shuffle across a carpet or slide off upholstered furniture, a static charge builds up in your body and results in that sudden, uncomfortable "zap" of electricity when you touch a piece of metal or other conductor.

Are there any other **BENEFITS** to properly conditioned air?

Yes, it can help you save energy! Warm, humid summer air feels hotter than it actually is because of the moisture it contains. That same principle applies to your home in the winter. By keeping the relative humidity inside your home at an ideal level, you can turn your thermostat down a few degrees and still feel comfortable. Dialing down your thermostat just three degrees can reduce your heating bill by as much as 5%.

How much **HUMIDITY** does my home need?

How much humidity your home needs depends on its size and construction, which affects the number of air changes experienced per hour. The more frequently the warm air in your home is replaced by colder, drier outside air, the greater the need for humidification.

The Air Conditioning and Refrigeration Institute, a non-profit trade association, developed and published the guidelines used by most contractors today. The guidelines classify home construction as "tight," "average" or "loose".

Tight homes have insulated walls and ceilings, vapor barriers and weather stripping around windows and doors. Windows and doors fit snugly and the fireplace has an effective damper. A tight home experiences about 1/2 air change per hour.

Average homes have insulated walls and ceilings, vapor barriers and a fireplace damper but loose storm doors and windows. Average homes experience one air change per hour.

Loose homes have little insulation, no vapor barriers, no weather stripping and no storm doors or windows. These homes typically experience two air changes per hour.

If you know the size of your home, you can evaluate its construction and refer to the chart for a good estimate of how much capacity your humidifier must have. Your GENERALAire heating and air conditioning dealer can help you with these calculations and show you the GENERALAire humidifier that's right for your home.

Why should I choose **GENERALAire** humidifiers?

GENERALAire's patented water tray design on flow-through models assures that the evaporator pad is moistened thoroughly and uniformly for greatest evaporative efficiency. Drum type units are designed to provide the maximum amount of water to the air for evaporation. An evaporator sleeve picks up water as it slowly rotates in a reservoir of water. With GENERALAire humidifiers, more water gets into the air and you'll not only feel more comfortable, but you'll save on your water bill as well.

This chart indicates the square foot area various General humidifiers will humidify based on a 70°F–35% relative humidity indoor conditions using ARI Guideline F Humidity Load Determination Method.

Model No.	GPD*	Loose	Average	Tight
1099	23.0	2500	3538	5476
1137	21.3	2352	3277	5071
1042	19.2	2086	2964	4571
SL-16	19.2	2086	2964	4571
81	18.0	1957	2769	4286
65	14.0	1522	2154	3333
747-L	16.0	1739	2462	3809

* NOTE: Figures are based on an 8 ft. ceiling height. GPD shown is a 140° plenum temperature. Square footage may be adjusted for other plenum temperatures. See humidifier specification section for evaporative output at other plenum temperatures.

Humidity requirements in GPD based on house size and type of construction (from ARI Guideline F)

TYPE OF CONSTRUCTION	SIZE OF HOUSE (sq. ft.)*					
	500	1000	1500	2000	2500	3000
TIGHT	2.1	4.2	6.4	8.5	10.6	12.7
AVERAGE	3.3	6.5	9.8	13.1	16.3	19.6
LOOSE	4.6	9.2	13.8	18.4	23.0	27.6

*Based on 8 ft. ceiling height